

4,557,780

15

polymers or copolymers having carboxyl modifications thereto; and fourth and fifth layers adhered to said second and third layers on the respective surfaces opposite said first layer, said fourth and fifth layers comprising 40% to 100% ethylene vinyl acetate and 60% to 0% linear low density polyethylene;

(b) cooling said five layer film;

(c) reheating said five layer film to molecular orientation temperatures;

(d) molecularly orienting said five layer film; and

(e) cooling said molecularly oriented five layer film; said oriented film being susceptible to being made into a closed and sealed container by means of heat seals formed along terminal edges of adjacent superimposed sheets thereof.

2. A method of making a five layer oriented polymeric film, said method comprising the steps of:

(a) coextruding a five layer film having a first barrier layer, the composition of said first layer being 10% to 50% nylon or nylon copolymer and 90% to 50% ethylene vinyl alcohol, said first layer having two opposing surfaces; second and third adhesive layers adhered to said surfaces of said first layer, said second and third adhesive layers both comprising olefinic polymers or copolymers having carboxyl modifications thereto; and fourth and fifth layers adhered to said second and third layers on the respective surfaces opposite said first layer, said fourth and fifth layers comprising 40% to 100% ethylene vinyl acetate and 60% to 0% linear low density polyethylene;

(b) cooling said five layer film;

(c) reheating said five layer film to molecular orientation temperature;

(d) molecularly orienting said five layer film;

(e) heat setting said molecularly oriented film; and

(f) cooling said molecularly oriented film.

3. A method of making a five layer oriented film as in claim 1 or 2 wherein said film is coextruded in the shape of a tube and is oriented by introducing into said tube a pressurized gas, and drawing said tube between two nips having a differential rate of speed therebetween, such that the pressure of said gas and the drawing of said nips effect the molecular orientation of said film as an expanded tube.

4. A method of making a five layer oriented film as in claim 3 and wherein said fourth and fifth layers comprise a blend of 10% to 60% linear low density polyethylene and 90% to 40% ethylene vinyl acetate.

5. A method of making a five layer oriented film as in claim 3 and wherein said first layer is 40% nylon and 60% ethylene vinyl alcohol.

6. A method of making a five layer oriented film as in claim 3 and wherein the compositions of said second and third layers are chosen from the group consisting of modified low density polyethylene, modified linear low density polyethylene, modified medium density polyethylene, modified ethylene vinyl acetate, and blends of said herein recited polymers and copolymers, the compositions of said fourth and fifth layers comprising blends of 25% to 40% linear low density polyethylene and 75% to 60% ethylene vinyl acetate.

7. A method of making a five layer oriented film as in claim 3 and wherein said first layer is 30% to 50% nylon and 70% to 50% ethylene vinyl alcohol.

8. A method of making a five layer film as in claim 7 and wherein the compositions of said second and third layers are chosen from the group consisting of modified low density polyethylene, modified linear low density

16

polyethylene, modified medium density polyethylene, modified ethylene vinyl acetate, and blends of said herein recited polymers and copolymers, the compositions of said fourth and fifth layers comprising blends of 25% to 40% linear low density polyethylene and 75% to 60% ethylene vinyl acetate.

9. A method of making a five layer oriented film as in claim 3 and wherein said first layer consists essentially of ethylene vinyl alcohol.

10. A method of making a five layer film as in claim 9 and wherein the compositions of said second and third layers are chosen from the group consisting of modified low density polyethylene, modified linear low density polyethylene, modified medium density polyethylene, modified ethylene vinyl acetate, and blends of said herein recited polymers and copolymers, the compositions of said fourth and fifth layers comprising blends of 25% to 40% linear low density polyethylene and 75% to 60% ethylene vinyl acetate.

11. A method of making a five layer oriented polymeric film as in claim 1 or 2 and wherein said first layer is 30% to 50% nylon and 70% to 50% ethylene vinyl alcohol.

12. A method of making a five layer oriented film as in claim 11 and wherein said fourth and fifth layers comprise a blend of 25% to 40% linear low density polyethylene and 75% to 60% ethylene vinyl acetate.

13. A method of making a five layer oriented film as in claim 11 and wherein the compositions of said second and third layers are chosen from the group consisting of modified low density polyethylene, modified linear low density polyethylene, modified medium density polyethylene, modified ethylene vinyl acetate, and blends of said herein recited polymers and copolymers, the compositions of said fourth and fifth layers comprising blends of 25% to 40% linear low density polyethylene and 75% to 60% ethylene vinyl acetate.

14. A method of making a five layer oriented polymeric film as in claim 1 or 2 and wherein said first layer is 40% nylon and 60% ethylene vinyl alcohol.

15. A method of making a five layer oriented polymeric film as in claim 1 or 2 and wherein said first layer consists essentially of ethylene vinyl alcohol.

16. A method of making a five layer film as in claim 15 and wherein the compositions of said second and third layers are chosen from the group consisting of modified low density polyethylene, modified linear low density polyethylene, modified medium density polyethylene, modified ethylene vinyl acetate and blends of said herein recited polymers and copolymers, the compositions of said fourth and fifth layers comprising blends of 25% to 40% linear low density polyethylene and 75% to 60% ethylene vinyl acetate.

17. A method of making a five layer oriented film as in claim 1 or 2 and wherein the compositions of said second and third adhesive layers are chosen from the group consisting of modified low density polyethylene, modified linear low density polyethylene, modified medium density polyethylene, modified ethylene vinyl acetate, and blends of said herein recited polymers and copolymers; the compositions of said fourth and fifth layers comprising blends of 25% to 40% linear low density polyethylene and 75% to 60% ethylene vinyl acetate.

18. A method of fabricating a plastic bag having an opening on one edge thereof; the remainder of the periphery of said bag having been closed by heat seals at



4,557,780

17

terminal edges thereof, said method comprising the steps of:

- (a) coextruding a five layer film having a first barrier layer, the composition of said first layer being 10% to 50% nylon or nylon copolymer and 90% to 50% ethylene vinyl alcohol, said first layer having two opposing surfaces; second and third adhesive layers adhered to said surfaces of said first layer, said second and third adhesive layers both comprising olefinic polymers or copolymers having carboxyl modifications thereto; and fourth and fifth layers adhered to said second and third layers on the respective surfaces opposite said first layer, said fourth and fifth layers comprising 40% to 100% ethylene vinyl acetate and 60% to 0% linear low density polyethylene;
- (b) cooling said five layer film;
- (c) reheating said five layer film to molecular orientation temperature;
- (d) molecularly orienting said five layer film;
- (e) cooling said molecularly oriented five layer film; and
- (f) forming heat seals around the periphery of said bag at terminal edges thereof, but not along said one edge; said bag being susceptible to being closed by means of a heat seal along said opening.

18

19. A method of fabricating a plastic bag as in claim 18 and including, after step (d), and before step (e), the additional step of heat setting the oriented film by holding it at an elevated temperature of 200° to 250° Fahrenheit for at least 2 seconds.

20. A method of fabricating a plastic bag as in claim 18 or 19 wherein said first layer is 30% to 50% nylon and 70% to 50% ethylene vinyl alcohol.

21. A method of fabricating a plastic bag as in claim 18 or 19 wherein said first layer consists essentially of ethylene vinyl alcohol.

22. A method of fabricating a plastic bag as in claim 20 and wherein said fourth and fifth layers comprise a blend of 25% to 40% linear low density polyethylene and 75% to 60% ethylene vinyl acetate.

23. A method of fabricating a plastic bag as in claim 18 or 19 and wherein the compositions of said second and third adhesive layers are chosen from the group consisting of modified low density polyethylene, modified linear low density polyethylene, modified medium density polyethylene, modified ethylene vinyl acetate, and blends of said herein recited polymers and copolymers; the compositions of said fourth and fifth layers comprising blends of 25% to 40% linear low density polyethylene and 75% to 60% ethylene vinyl acetate.



I HEREBY CERTIFY THAT THIS CORRESPONDENCE  
IS BEING DEPOSITED WITH THE UNITED STATES  
POSTAL SERVICE AS FIRST CLASS MAIL POSTAGE  
PREPAID IN AN ENVELOPE ADDRESSED TO:  
COMMISSIONER OF PATENTS AND TRADEMARKS,  
WASHINGTON, D.C. 20231  
ON FEBRUARY 9, 1987

RECEIVED

FEB 25 1987

GROUP 150

Mark B. Quatt  
MARK B. QUATT  
REGISTRATION NO. 30,484

FEBRUARY 9, 1987  
DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gautam P. Shah

Group Art Unit: 154

Serial No.: 842,600

Examiner: Thomas J. Herbert

Filed: March 21, 1986

Docket: 41259

For: Oxygen Barrier Oriented Shrink Film

INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner of  
Patents and Trademarks  
Washington, D. C. 20231

Sir:

Pursuant to 37 CFR 1.56 and in accordance with 37 CFR section 1.97 et. seq. Applicant, through and by his attorneys, hereby wishes to direct the Examiner's attention to the hereinafter discussed documents.

A filled in PTO-1449 form listing both of the documents listed below is presented herewith for the Examiner's review and convenience. Copies of the listed documents are enclosed. Each of these references appear to be relevant and/or material to the present application for the reasons given below.

EPO Patent Application No. 0,149,321 (Ohya et al) appears to disclose a heat shrinkable tubular film having a gas barrier layer of vinylidene chloride copolymer, outer layers of polyolefin such as linear low density polyethylene and blends of LLDPE with ethylene vinyl acetate copolymer, at least one intermediate layer of for example a polyamide; and adhesive layers disposed between any of above layers.

404/870205/2/1

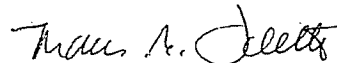
U.K. Patent Application GB 2,139,948a (Dobbie) appears to disclose a multilayer, preferably coextruded heat sealable film having a surface layer of a heat sealable polymer such as linear low density polyethylene or LLDPE blended with other polymers such as ethylene vinyl acetate, an ethylene vinyl alcohol copolymer oxygen barrier layer, and a layer of polypropylene. The adjacent layers may be bonded together by a tie layer consisting of a polymeric adhesive such as polyolefin grafted with monomers having polar functional groups, for example Plexar resins.

By inclusion of any given document in this Information Disclosure Statement Applicant in no way admits that such document is effective as prior art against the above-identified application under either 35 USC section 102 or 35 USC section 103.

The Examiner is requested to independently review each of the cited references for their relevance to the present case.

Please charge any additional prosecutorial fees which may be due to Grace deposit account no. 07-1765.

Respectfully submitted,



Mark B. Quatt  
Attorney for Applicants  
Registration No. 30,484

W. R. Grace & Co.  
Cryovac Division  
P. O. Box 464  
Duncan, S. C. 29334  
(803) 433-2817

404/870205/2/2



I HEREBY CERTIFY THAT THIS CORRESPONDENCE  
IS BEING DEPOSITED WITH THE UNITED STATES  
POSTAL SERVICE AS FIRST CLASS MAIL POSTAGE  
PREPAID IN AN ENVELOPE ADDRESSED TO:  
COMMISSIONER OF PATENTS AND TRADEMARKS,  
WASHINGTON, D.C. 20231,  
ON FEBRUARY 13, 1987

Mark B. Quatt

MARK B. QUATT  
REGISTRATION NO. 30,484

FEBRUARY 13, 1987  
DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gautam P. Shah

Group Art Unit: 154

Serial No.: 842,600

Examiner: Thomas J. Herbert

Filed: March 21, 1986

Docket: 41259

For: Oxygen Barrier Oriented Shrink Film

AMENDMENT

Honorable Commissioner of  
Patents and Trademarks  
Washington, D. C. 20231

Sir:

In response to the Office Action dated November 23, 1986, please amend  
the application as follows.

IN THE CLAIMS

Kindly amend the claims as follows:

- Sub B' >*  
*R*
- Claim 1. (amended) An oriented coextruded multilayer film comprising:
- a) a core layer comprising an ethylene vinyl alcohol copolymer;
  - b) two intermediate layers each comprising a polyamide;
  - c) two outer layers each comprising a polymeric material or blend of polymeric materials; and

404/870211/5/1

RECEIVED  
FEB 27 1987  
GROUP 150

*Amend B1  
concluded*

d) each of said intermediate layers adhered to a respective outer layer by a layer of adhesive polymeric material [.] ;

said layers of the multilayer film forming a symmetrical heat-shrinkable structure.

404/870211/5/2

REMARKS

The applicant confirms the election of Group I, claims 1 through 23 with traverse, as made by telecon with the Examiner on November 5, 1986.

Group II, claims 24 through 28 are withdrawn subject to the right to file a divisional application for those claims.

The applicant traverses the rejection of claims 1 through 23 under 35 USC section 103.

Neither Sheptak nor Hirt teach an oriented film. The Sheptak disclosure is directed to a thermal insulation material for refrigerator cabinets and the like. The Hirt disclosure concerns child proof medication packages. Neither disclosure refers to or suggests orientation of the film, much less biaxial orientation, and neither alludes to any heat shrinkable feature of the respective films. Indeed, it is questionable whether such a feature would be desirable in either thermal insulation or child medication package utilities.

Additionally, neither disclosure includes or teaches a symmetrical structure as claimed.

The Mueller reference teaches a shrinkable film, but does not disclose the use of intermediate layers each comprising a polyamide.

Employing the outer layers of polyolefin blends taught by Mueller as the outer layers in Sheptak or Hirt would still produce an asymmetrical, not a symmetrical multilayer film structure.

404/870211/5/3



The applicant also draws attention to the construction of the Sheptak film, which is not totally coextruded, but relies on extrusion lamination in order to adhere the oriented polypropylene outer layer to the coextruded substrate. The Hirt reference offers no description of the manner of construction, but it appears unlikely that a totally coextruded film is envisioned. The reference does teach that one of the two sheets 1 and 2 may also be an aluminum foil, suggesting a laminated, not coextruded structure.

The applicant has made a bona fide effort to respond to the grounds of rejection, and solicits speedy allowance of the claims as amended. The Examiner is also invited to communicate with the applicant's representative if it will expedite the prosecution of this case.

Respectfully submitted

*Mark B. Quatt*

Mark B. Quatt  
Attorney for Applicant  
Registration No. 30,484

W. R. Grace & Co.  
P. O. Box 464  
Duncan, S. C. 29334  
(803) 433-2817

404/870211/5/4





I HEREBY CERTIFY THAT THIS CORRESPONDENCE  
IS BEING DEPOSITED WITH THE UNITED STATES  
POSTAL SERVICE AS FIRST CLASS MAIL POSTAGE  
PREPAID IN AN ENVELOPE ADDRESSED TO:  
COMMISSIONER OF PATENTS AND TRADEMARKS,  
WASHINGTON, D.C. 20231,  
ON FEBRUARY 13, 1987

Mark B. Quatt  
MARK B. QUATT  
REGISTRATION NO. 30,484

FEBRUARY 13, 1987  
DATE

RECEIVED

FEB 27 1987

GROUP 150

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gautam P. Shah

Group Art Unit: 154

Serial No.: 842,600

Examiner: Thomas J. Herbert

Filed: March 21, 1986

Docket No.: 41259

For: Oxygen Barrier Oriented Shrink Film

TRANSMITTAL OF AMENDMENT

Honorable Commissioner of  
Patents and Trademarks  
Washington, D. C. 20231

Sir:

Transmitted herewith for filing is an amendment with regard to the  
above-identified application.

The fee, after amendment, has been calculated as shown below:

	Claims Presented	Highest Prev. Paid for	Present Extra	Rate	Additional Fee
TOTAL	23	- (20) or	28 =	x 12	=000.00
INDEPENDENT	3	- (03) or	4	x 34	=000.00
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIMS					+110 = 000.00
					TOTAL= 000.00

Please charge Grace deposit account no. 07-1765 in the total amount  
indicated above.

The Commissioner is authorized to charge payment or credit any  
overpayment of (1) any filing fees under 37 C.F.R. 1.16 for the  
presentation of extra claims and (2) any patent application processing fees  
under 37 C.F.R. 1.17 to Grace deposit account no. 07-1765.

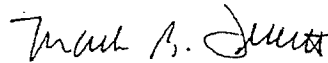
404/870112/6/1

The Commissioner is authorized to charge any additional fees which may be required or credit any overpayment to Grace deposit account no. 07-1765.

This document is filed in duplicate.

The undersigned may be contacted at (803) 433-2817.

Respectfully submitted,



Mark B. Quatt  
Registration No. 30,484  
Attorney for Applicant

Enclosures  
W. R. Grace & Co.  
P. O. Box 464  
Duncan, S. C. 29334

404/870112/6/2


**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

 Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
06/842,600	03/21/86	SHAM	6-1257

 W. R. GRACE & CO.  
CRYOVAC DIVISION  
PATENT DEPT.  
P.O. BOX 444  
DUNCAN, SC 29334

EXAMINER	
HERBERT J. J.	
ART UNIT	PAPER NUMBER
154	8

DATE MAILED: 05/08/87

 This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

- ☐ This application has been examined
 ☒ Responsive to communication filed on \_\_\_\_\_
 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
 Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449       | 4. <input type="checkbox"/> Notice of informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474      | 6. <input type="checkbox"/> _____   |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-28 are pending in the application.  
 Of the above, claims 24-28 are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-23 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other \_\_\_\_\_

PTOL-326 (Rev. 7-82)

EXAMINER'S ACTION

Serial No. 842,600

-2-

Art Unit 154

15.

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

16.

Claims 1-23 are rejected under 35 U.S.C. 103 as being unpatentable over Sheptak in view of Mueller for reasons of record.

Applicant's arguments filed on February 17, 1987 have been fully considered but they are not deemed to be persuasive.

The rejection under Sec. 103 of claims 1-23 over Hirt is no longer adhered to in view of applicant's arguments and amendment. Contrary to arguments, Sheptak discloses a multi-layer coextruded film, which film is symmetrical, comprising the same layer materials as claimed. This multi-layer film - identified as "14" in Sheptak - is a self supporting film. Also the instant

Serial No. 842,600

-3-

Art Unit 154

claims do not exclude the use of other layers. Note column 2, lines 59-64, column 3, lines 3-4 and column 4, lines 15-26 of Sheptak. AS to the argument of orientation, Sheptak teaches the orientation of layers as well as Mueller teaching coextruding and biaxially orientation of similar multi-layer films.

17.

Ohya et al. and Dobbie et al - cited by applicant - are made of record as of interest. Ohya et al. further show oriented coextruded multi-layer (gas barrier layer containing) film of similar structure to be old with the use of adhesive bonding (tie) layers. Dobbie et al. also shows an ethylene vinyl alcohol copolymer gas barrier layer coextruded multi-layer film.

18.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CFR 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

TJHerbert,Jr:bh

(703) 557-6525

5/4/87



THOMAS J. HERBERT  
PRIMARY EXAMINER  
ART UNIT 154

Sheet 1 of 1

FORM PTO-1449 (REV. 7-80)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 41259	SERIAL NO. 842,600
LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary).				APPLICANT Gautam P. Shah	
				FILING DATE March 21, 1986	GROUP 154

U.S. PATENT DOCUMENTS							# 8
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
AA							
AB							
AC							
AD							
AE							
AF							
AG							
AH							
AI							
AJ							
AK							

FOREIGN PATENT DOCUMENTS						
*	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<del>AL</del>	<del>0149321</del>	<del>4/19/85</del>	<del>JP</del>	<del>428</del>	<del>518</del>	
<del>AM</del>	<del>2,139,948</del>	<del>11-1984</del>	<del>UK</del>	<del>428</del>	<del>518</del>	
AN						
AO						
AP						

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
*AR	
AS	
AT	

EXAMINER <i>T. J. Herbert Jr.</i>	DATE CONSIDERED <i>May 1 1987</i>
--------------------------------------	--------------------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

USCOM:DC 8-3825







PATENT

GP 154

I HEREBY CERTIFY THAT THIS CORRESPONDENCE  
IS BEING DEPOSITED WITH THE UNITED STATES  
POSTAL SERVICE AS FIRST CLASS MAIL POSTAGE  
PREPAID IN AN ENVELOPE ADDRESSED TO:  
COMMISSIONER OF PATENTS AND TRADEMARKS,  
WASHINGTON, D.C. 20231,  
ON MAY 8, 1987

Mark B. Quatt

MARK B. QUATT  
REGISTRATION NO. 30,484

MAY 8, 1987  
DATE

#9  
5/19/87

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gautam P. Shah / Group Art Unit: 154  
Serial No.: 842,600 / Examiner: Thomas J. Herbert  
Filed: March 21, 1986 / Docket: 41259  
For: Oxygen Barrier Oriented Shrink Film /

INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner of  
Patents and Trademarks  
Washington, D. C. 20231

RECEIVED

MAY 14 1987

GROUP 150

Sir:

Pursuant to 37 CFR 1.56 and in accordance with 37 CFR section 1.97  
et. seq. Applicant, through and by his attorneys, hereby wishes to direct  
the Examiner's attention to the hereinafter discussed document.

A filled in PTO-1449 form listing the document listed below is pre-  
sented herewith for the Examiner's review and convenience. A copy of the  
listed document is enclosed. This reference appears to be relevant and/or  
material to the present application for the reasons given below.

U. S. Patent No. 4,561,920 issued to Foster appears to disclose a  
biaxially oriented barrier film of five-layer construction, with an  
interior layer of EVOH, tie layers, and outer layers of polyolefin such as  
polypropylene homopolymer or copolymer, or linear low density polyethylene.

404/870506/5/1

By inclusion of this document in this Information Disclosure Statement Applicant in no way admits that such document is effective as prior art against the above-identified application under either 35 USC section 102 or 35 USC section 103.

The Examiner is requested to review independently the cited reference for its relevance to the present case.

Please charge any additional prosecutorial fees which may be due to Grace deposit account no. 07-1765.

Respectfully submitted,

*Mark B. Quatt*

Mark B. Quatt  
Attorney for Applicants  
Registration No. 30,484

W. R. Grace & Co.  
Cryovac Division  
P. O. Box 464  
Duncan, S. C. 29334  
(803) 433-2817

404/870506/5/2

Sheet 1 of 2

FORM PTO-1449 (REV. 7-80)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 41259	SERIAL NO. 842,600
LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT Gautam P. Shah	
				FILING DATE March 21, 1986	GROUP 154

U.S. PATENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>TJH</i>	AA 4,182,457	1-1980	Yanada et al	428	352	
	AB 4,485,667	9-1983	Christensen et al	428	85	
<i>TJH</i>	AC 4,588,648	5-1986	Krueger et al	428	425.8	
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					

FOREIGN PATENT DOCUMENTS						
DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
					YES	NO
AL						
AM						
AN						
AO						
AP						

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
AR	
AS	
AT	

EXAMINER <i>TJH Herbert</i>	DATE CONSIDERED <i>6/8/87</i>
--------------------------------	----------------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

references cited on 892 attach. to #12

USCOM-DC 86-3981





Sheet 2 of 2

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 41259	SERIAL NO. 842,600
LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary).		APPLICANT Gautam P. Shah	
		FILING DATE March 21, 1986	GROUP 154

U.S. PATENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA	4,561,920	12-1985	Poster	156	244.11	
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

FOREIGN PATENT DOCUMENTS						
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL						
AM						
AN						
AO						
AP						

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)		
AR		
AS		
AT		

EXAMINER <i>T. Herbert</i>	DATE CONSIDERED <i>6/8/87</i>
-------------------------------	----------------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

USCOM:DC 85-2965

## EXPRESS MAIL CERTIFICATE

15c PATENT

P6  
6/4/87

O.K. to enter  
5/11/87  
TSA/154

HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS EXPRESS MAIL, POSTAGE PREPAID, IN AN ENVELOPE ADDRESSED TO: COMMISSIONER OF PATENTS AND TRADEMARKS, WASHINGTON, D.C. 20231, ON May 22, 1987, SAID ENVELOPE HAVING AN EXPRESS MAIL MAILING LABEL NUMBER OF: B 23298919.

Thomas J. Herbert

#10/B  
(K.E.)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Response under  
37 CFR 1.116  
Expedited Procedure  
Examining Group 241

Applicant: Gautam P. Shah ✓

Group Art Unit: 154

Serial No.: 842,600 ✓

Examiner: Thomas J. Herbert

Filed: March 21, 1986 ✓

Docket: 41259

For: Oxygen Barrier Oriented Shrink Film ✓

RECEIVED

JUN 02 1987

GROUP 150

AMENDMENT AFTER FINAL REJECTION

Honorable Commissioner of  
Patents and Trademarks  
Washington, D. C. 20231

Sir:

In response to the Office Action dated May 8, 1987 and pursuant to 37 CFR 1.116 the applicant, through and by his attorneys, hereby respectfully submits the following amendment and accompanying remarks for your review and consideration. This amendment and remarks are offered to clarify the issues and present the finally rejected claims in better form for consideration upon appeal, if such action is necessary.

IN THE CLAIMS

Kindly amend the claims as follows:

Claim 1. (amended) An oriented coextruded [multilayer] film having at least seven layers arranged symmetrically comprising:

a) a core layer comprising an ethylene vinyl alcohol copolymer;

b) two intermediate layers each comprising a polyamide;

404/870518/2/1

B<sup>1</sup>

c) two outer layers each comprising a polymeric material or blend of polymeric materials; and

d) [each of said intermediate layers adhered to a respective outer layer by a layer of adhesive polymeric material; said layers of the multilayer film forming a symmetrical heat-shrinkable structure] two layers, each comprising an adhesive polymeric material, which adhere each of said intermediate layers to a respective outer layer .

B<sup>2</sup>

Claim ~~9~~<sup>16</sup>. (Amended) An oriented coextruded [multilayer] film having at least seven layers arranged symmetrically comprising:

a) a core layer comprising an ethylene vinyl alcohol copolymer;

b) two intermediate layers each comprising a polyamide;

c) two outer layers each comprising a blend of polymeric material taken from the group consisting of (i) a blend of a linear low density polyethylene, a linear medium density polyethylene, and an ethylene vinyl acetate copolymer, and (ii) a blend of an ethylene propylene copolymer and a polypropylene; and

d) [each of said intermediate layers adhered to a respective outer layer by a layer of adhesive polymeric material] two layers, each comprising an adhesive polymeric material, which adhere each of said intermediate layers to a respective outer layer .

B<sup>3</sup>

Claim ~~14~~<sup>1</sup>. (Amended) A biaxially oriented coextruded [multilayer] film having at least seven layers arranged symmetrically comprising:

a) a core layer comprising an ethylene vinyl alcohol copolymer;

b) two intermediate layers each comprising a polyamide;

404/870518/2/2



B<sup>3</sup>

c) two outer layers each comprising a blend of polymeric material taken from the group consisting of (i) a blend of a linear low density polyethylene, a linear medium density polyethylene, and an ethylene vinyl acetate copolymer, and (ii) a blend of an ethylene propylene copolymer and a polypropylene;

d) [each of said intermediate layers adhered to a respective outer layer by a layer of adhesive polymeric material] two layers, each comprising an adhesive polymeric material, which adhere each of said intermediate layers to a respective outer layer ; and

e) said film having a total thickness of from about 0.5 mils to about 2 mils.

404/870518/2/3

REMARKS

The Examiner is respectfully requested to reconsider the grounds on which the Final Rejection is based.

Claims 1, 6, and 14 have been amended to clarify that:

- (1) at least seven layers are claimed, and that
- (2) these layers are symmetrically arranged.

Sheptak only teaches five layers, symmetrically arranged (14) and the overall eight layer structure (S) of the reference is assymetric.

If, as the Examiner has argued, it would be obvious to employ the outer layers of Mueller at the outer layers in Sheptak, one of two structures would result. In the first, the outer layers 15 of five-layer film 14 of Sheptak would have the blends disclosed in Mueller. The second possibility would be that one of layers 15 (adjacent the porous mass of glass fibers comprising batt 13) and layer 20 would be the "outer" layers of Mueller.

In either hypothetical, an oriented coextruded film having at least seven layers arranged symmetrically is not achieved.

The applicant solicits reconsideration of the Final Rejection in light of these remarks, and the claims as amended. The Examiner is invited to communicate with the undersigned representative if it will expedite the prosecution of this case.

Respectfully submitted,

*Mark B. Quatt*  
Mark B. Quatt  
Attorney for Applicant  
Registration No. 30,484

W. R. Grace & Co.  
P. O. Box 464  
Duncan, S. C. 29334  
(803) 433-2817  
404/870518/2/4



PATENT

EXPRESS MAIL CERTIFICATE

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS EXPRESS MAIL, POSTAGE PREPAID, IN AN ENVELOPE ADDRESSED TO: COMMISSIONER OF PATENTS AND TRADEMARKS, WASHINGTON, D.C. 20231, ON May 22, 1987, SAID ENVELOPE HAVING AN EXPRESS MAIL MAILING LABEL NUMBER OF: B23298919.



*Vivian P. West*  
Vivian P. West

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Gautam P. Shah                      Group Art Unit: 154  
Serial No.: 842,600                                  Examiner: Thomas J. Herbert  
Filed: March 21, 1986                                Docket No.: 41259  
For: Oxygen Barrier Oriented Shrink Film

TRANSMITTAL OF AMENDMENT

Honorable Commissioner of  
Patents and Trademarks  
Washington, D. C. 20231

Sir:

Transmitted herewith for filing is an amendment with regard to the above-identified application.

The fee, after amendment, has been calculated as shown below:

	Claims Presented	Highest Prev. Paid for	Present Extra	Rate	Additional Fee
TOTAL	23	- (20) or	28	0=	x 12 =000.00
INDEPENDENT	3	- (03) or	4	0=	x 34 =000.00
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIMS					+110 = 000.00
					TOTAL= 000.00

Please charge Grace deposit account no. 07-1765 in the total amount indicated above.

404/870520/2/1

The Commissioner is authorized to charge payment or credit any overpayment of (1) any filing fees under 37 C.F.R. 1.16 for the presentation of extra claims and (2) any patent application processing fees under 37 C.F.R. 1.17 to Grace deposit account no. 07-1765.

The Commissioner is authorized to charge any additional fees which may be required or credit any overpayment to Grace deposit account no. 07-1765.

This document is filed in duplicate.

The undersigned may be contacted at (803) 433-2817.

Respectfully submitted,

*Mark B. Quatt*

Mark B. Quatt  
Registration No. 30,484  
Attorney for Applicant

W. R. Grace & Co.  
P. O. Box 464  
Duncan, S. C. 29334

May 22, 1987  
DATE

404/870520/2/2



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
06/842,600	03/21/86	SHAN	G 41259

W. R. GRACE & CO.  
CRYOVAC DIVISION  
PATENT DEPT.  
P.O. BOX 464  
DUNCAN, SC 29334

EXAMINER	
HERBERT JR/T	
ART UNIT	PAPER NUMBER
154	11

DATE MAILED:

EXAMINER INTERVIEW SUMMARY RECORD

37/24/87

All participants (applicant, applicant's representative, PTO personnel):

(1) \_\_\_\_\_ (3) \_\_\_\_\_

(2) \_\_\_\_\_ (4) \_\_\_\_\_

June 8, 1987

Date of interview \_\_\_\_\_

Type: ☒ Telephonic ☐ Personal (copy is given to ☐ applicant ☐ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☐ No. If yes, brief description: \_\_\_\_\_

Agreement ☒ was reached with respect to some or all of the claims in question. ☐ was not reached.

1, 5, 24-28

Claims discussed: \_\_\_\_\_

Identification of prior art discussed: \_\_\_\_\_

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: Agreed to cancel

non-elected claims 24-28 and to change dependency of claim 5 from "1" to 4.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

Unless the paragraphs below have been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW (e.g., items 1-7 on the reverse side of this form). If a response to the last Office action has already been filed, then applicant is given one month from this interview date to provide a statement of the substance of the interview.

☒ It is not necessary for applicant to provide a separate record of the substance of the interview.

☐ Since the examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action.

*Thomas J. Herbert*  
Examiner's Signature

PTOL-413 (REV. 1-84)

ORIGINAL FOR INSERTION IN RIGHT HAND FLAP OF FILE WRAPPER

PATENT

RECEIVED  
JUN 12 1987

GROUP 150

FB  
6/15/87

#11/2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gautam P. Shah                      Group Art Unit: 154  
Serial No.: 842,600                              Examiner: Thomas J. Herbert  
Filed: March 21, 1986                          Docket: 41259  
For: Oxygen Barrier Oriented Shrink Film

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner of  
Patents and Trademarks  
Washington, D. C. 20231

Sir:

Further to the Information Disclosure Statement of May 8, 1987 and pursuant to 37 CFR 1.56 and in accordance with 37 CFR section 1.97 et. seq. Applicant, through and by his attorneys, hereby wishes to advise that on or about the first week in June, 1985, unoriented film samples having the construction:

90% LLDPE / LLDPE-based/Nylon 6/EVOH/Nylon 6/LLDPE-based/90% LLDPE  
10% Antiblock/Tie Layer / / / Tie Layer / 10% Antiblock

were tested at Richardson Foods (New York) and So-Pak-Co (South Carolina) for use in vertical form/fill/seal machinery as pouch material.

The film was unoriented, and is the subject matter of USSN 834,694 filed February 28, 1986. The applicant is Ennis Fant.

404/870611/3/1

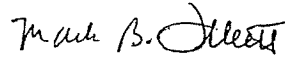


The applicant did not earlier submit this information through the inadvertent oversight of applicant's representative.

The Examiner is requested to review independently the cited material for its relevance to the present case.

Please charge any additional prosecutorial fees which may be due to Grace deposit account no. 07-1765.

Respectfully submitted,



Mark B. Quatt  
Attorney for Applicants  
Registration No. 30,484

W. R. Grace & Co.  
Cryovac Division  
P. O. Box 464  
Duncan, S. C. 29334  
(803) 433-2817

404/870611/3/2



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
06/842,600	03/21/86	SHAH	G 41259

W. R. GRACE & CO.  
CRYOVAC DIVISION  
PATENT DEPT.  
P.O. BOX 464  
DUNCAN, SC 29334

EXAMINER	
HERBERT JR/T	
ART UNIT	PAPER NUMBER
154	12/c

DATE MAILED:

37/26/87

### NOTICE OF ALLOWABILITY

#### PART I

- ☒ This communication is responsive to may 22, 1987; June 13, 1987
- ☒ All the claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance And Issue Fee Due or other appropriate communication will be sent in due course.
- ☒ The allowed claims are 1-23
- ☐ The drawings filed on \_\_\_\_\_ are acceptable.
- ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has [ ] been received. [ ] not been received. [ ] been filed in parent application Serial No. \_\_\_\_\_, filed on \_\_\_\_\_.
- ☒ Note the attached Examiner's Amendment.
- ☒ Note the attached Examiner Interview Summary Record, PTOL-413.
- ☐ Note the attached Examiner's Statement of Reasons for Allowance.
- ☒ Note the attached NOTICE OF REFERENCES CITED, PTO-892.
- ☒ Note the attached INFORMATION DISCLOSURE CITATION, PTO-1449.

#### PART II

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" indicated on this form. Failure to timely comply will result in the ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- ☒ APPLICANT MUST MAKE THE DRAWING CHANGES INDICATED BELOW IN THE MANNER SET FORTH ON THE REVERSE SIDE OF THIS PAPER.
  - ☒ Drawing Informalities are indicated on the NOTICE RE PATENT DRAWINGS, PTO-949, attached hereto or to Paper No. 5. CORRECTION IS REQUIRED.
  - ☐ The proposed drawing correction filed on \_\_\_\_\_ has been approved by the examiner. CORRECTION IS REQUIRED.
  - ☐ Approved drawing corrections are described by the examiner in the attached EXAMINER'S AMENDMENT. CORRECTION IS REQUIRED.
  - ☐ Formal drawings are now REQUIRED.

Any response to this letter should include in the upper right hand corner, the following information from the NOTICE OF ALLOWANCE AND ISSUE FEE DUE: ISSUE BATCH NUMBER, DATE OF THE NOTICE OF ALLOWANCE, AND SERIAL NUMBER.

#### Attachments:

- |  |  |
|--|--|
| <input type="checkbox"/> Examiner's Amendment                        | <input type="checkbox"/> Notice of Informal Application, PTO-152 |
| <input type="checkbox"/> Examiner Interview Summary Record, PTOL-413 | <input type="checkbox"/> Notice re Patent Drawings, PTO-949      |
| <input type="checkbox"/> Reasons for Allowance                       | <input type="checkbox"/> Listing of Bonded Draftsmen             |
| <input type="checkbox"/> Notice of References Cited, PTO-892         | <input type="checkbox"/> Other                                   |
| <input type="checkbox"/> Information Disclosure Citation, PTO-1449   |  |

Serial No. 842,600

-2-

Art Unit 154

An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the Issue Fee.

In accordance with the telephone interview held with Mr. Mark B. Quatt on June 8, 1987, amend the claims as follows.

Claim 5, line 1, cancel "claim 1" and insert therefor --claim 4--.

Cancel non-elected claims 24-28.

T.J.HERBERT:ag

(703) 557-6525

6/10/87



THOMAS J. HERBERT  
PRIMARY EXAMINER  
ART UNIT 154

PTOL-85 (REV. 4-86)


**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

 Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

**NOTICE OF ALLOWANCE  
AND ISSUE FEE DUE**

 W. R. GRACE & CO.  
CRYOVAC DIVISION  
PATENT DEPT.  
P.O. BOX 464  
DUNCAN, SC 29334

All communications regarding this application should give the serial number, date of filing, name of applicant, and batch number.

Please direct all communications to the Attention of "OFFICE OF PUBLICATIONS" unless advised to the contrary.

 The application identified below has been examined and found allowable for issuance of Letters Patent. **PROSECUTION ON THE MERITS IS CLOSED.**

	SC/SERIAL NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
	06/842,600	03/21/86	023	HERBERT JR, T	154 07/24/87
First Named Applicant	SHAH, GAUTAM P.				

TITLE OF INVENTION

OXYGEN BARRIER ORIENTED SHRINK FILM

	ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
	41259	428-220.000	026	UTILITY	NO	\$560.00	10/26/87

The amount of the issue fee is specified in 37 C.F.R. 1.18. If the applicant qualified for and has filed a verified statement of small entity status in accordance with 37 C.F.R. 1.27, the issue fee is one-half the amount for non-small entities. The issue fee due printed above reflects applicant's status as of the time of mailing this notice. A verified statement of small entity status may be filed prior to or with payment of the issue fee. However, in accordance with 37 C.F.R. 1.28, failure to establish status as a small entity prior to or with payment of the issue fee precludes payment of the issue fee in the amount so established for small entities and precludes a refund of any portion thereof paid prior to establishing status as a small entity.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE as indicated above. The application shall otherwise be regarded as ABANDONED. The issue fee will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the Patent and Trademark Office. Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of the notice of allowance, the issue fee is charged to the deposit account at the time of mailing of this notice in accordance with 37 C.F.R. 1.311. If the issue fee has been so charged, it is indicated above.

In order to minimize delays in the issuance of a patent based on this application, **this Notice may have been mailed prior to completion of final processing.** The nature and/or extent of the remaining revision or processing requirements may cause slight delays of the patent. In addition, **if prosecution is to be reopened, this Notice of Allowance will be vacated and the appropriate Office action will follow in due course.** If the issue fee has already been paid and prosecution is reopened, the applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a deposit account.

In the case of each patent issuing without an assignment, the complete post office address of the inventor(s) will be printed in the patent heading and in the Official Gazette. If the inventor's address is now different from the address which appears in the application, please fill in the information in the spaces provided on PTOL-85b enclosed. If there are address changes for more than two inventors, enter the additional addresses on the reverse side of the PTOL-85b.

The appropriate spaces in the ASSIGNMENT DATA section of PTOL-85b must be completed in all cases. If it is desired to have the patent issue to an assignee, an assignment must have been previously submitted to the Patent and Trademark Office or must be submitted not later than the date of payment of the issue fee as required by 37 C.F.R. 1.334. Where there is an assignment, the assignee's name and address must be provided on the PTOL-85b to ensure its inclusion in the printed patent.

Advance orders for 10 or more printed copies of the prospective patent can be made by completing the information in Section 4 of PTOL-85b and submitting payment therewith. If use of a deposit account is being authorized for payment, PTOL-85c should also be forwarded. The order must be for at least 10 copies and must accompany the issue fee. The copies ordered will be sent only to the address specified in section 1 or 1A of PTOL-85b.

☐ Note attached communication from the Examiner

☐ This notice is issued in view of applicant's communication filed \_\_\_\_\_

**IMPORTANT REMINDER**

Patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. See 37 CFR 1.20 (e)-(j).

**PATENT AND TRADEMARK OFFICE COPY.**


**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

 Address : COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
06/842,600	03/21/86	SHAH	G 41259

 W. R. GRACE & CO.  
CRYOVAC DIVISION  
PATENT DEPT.  
P.O. BOX 464  
DUNCAN, SC 29334

EXAMINER	
HERBERT JR, T	
ART UNIT	PAPER NUMBER
154	# 13

DATE MAILED: 12/18/87

**NOTICE OF ABANDONMENT**

This application is abandoned in view of:

1. ☐ Applicant's failure to respond to the Office letter, mailed \_\_\_\_\_.
2. ☐ Applicant's letter of express abandonment which is in compliance with 37 C.F.R. 1.138.
3. ☐ Applicant's failure to timely file the response received \_\_\_\_\_ within the period set in the Office letter.
4. ☒ Applicant's failure to pay the required issue fee within the statutory period of 3 months from the mailing date of 7-24-87 of the Notice of Allowance.

- ☐ The issue fee was received on \_\_\_\_\_.
- ☐ The issue fee has not been received in Allowed Files Branch as of \_\_\_\_\_.

In accordance with 35 U.S.C. 151, and under the provisions of 37 C.F.R. 1.316(b), applicant(s) may petition the Commissioner to accept the delayed payment of the issue fee if the delay in payment was unavoidable. The petition must be accompanied by the issue fee, unless it has been previously submitted, in the amount specified by 37 C.F.R. 1.17 (i), and a verified showing as to the causes of the delay.

If applicant(s) never received the Notice of Allowance, a petition for a new Notice of Allowance and withdrawal of the holding of abandonment may be appropriate in view of *Delgar Inc. v. Schuyler*, 172 U.S.P.Q. 513.

5. ☐ Applicant's failure to timely correct the drawings and/or submit new or substitute formal drawings by \_\_\_\_\_ as required in the last Office action.
- ☐ The corrected and/or substitute drawings were received on \_\_\_\_\_.
6. ☐ The reason(s) below.

 DIRECT ANY INQUIRIES TO :  
NAOMI SORRELL

 OR  
MARCIA CAMPBELL  
PUBLISHING DIVISION  
(703) 557-6403



(Rev. 12-1-84 Pub. 605)

FORM 11-5

11-17

Deputy ASST. Comm.

#14  
Petition  
P313c

020

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Gautam P. Shah

Serial No.: 842,600

Group No.: 154

Filed: March 21, 1986

Examiner: Thomas J. Herbert

For: Oxygen Barrier Oriented Shrink Film Patch No: 41259

Commissioner of Patents and Trademarks

Washington, D.C. 20231

RECEIVED

JAN 13 1988 -32

ATTENTION: Deputy Assistant Commissioner of Patents (MPEP, 1002.02(b)) DEPUTY ASST. COMM. 316C

PETITION TO ACCEPT DELAYED PAYMENT OF ISSUE FEE—FAILURE TO  
PAY UNINTENTIONAL (37 CFR 1.155(c) and 1.316(c))

NOTE: A terminal disclaimer should not accompany a petition to accept late payment of the issue fee under 37 CFR 1.155 or 1.316. Notice of July 9, 1995 (1059 O.G. 61).

1. Applicant petitions for acceptance of the issue fee for which payment was due on  
October 26, 1987

2. This petition is filed:

(check and complete (a) or (b))

(a) ☒ within one year of the issue fee due date.

NOTE: Under very limited conditions a petition to revive for unintentional failure to pay the issue fee may exceed the one year limit when abandonment is due to action or inaction by the applicant and the PTO performs a positive documented Official act which could lead a reasonable individual to conclude that the action or inaction was appropriate. Notice of August 25, 1985 (1059 O.G. 4).

(b) ☐ within three months of the date of the first decision in a petition to accept late payment of the issue fee because of unavoidable delay under 37 CFR 1.316(b).

(complete appropriate item below, if applicable)

☐ the three month period has been extended to \_\_\_\_\_☐ enclosed is a petition and fee for extension of the three month period to \_\_\_\_\_

NOTE: The non-statutory three month period may be extended up to four months if a petition for an extension of time and the fee set in 37 CFR 1.17(a) to (d) are filed with or prior to this petition.

3. The delay in payment of the issue fee was unintentional.

## CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Date: DECEMBER 24, 1987MARK R. QUATT  
(Type or print name of person mailing paper)Mark R. Quatt  
(Signature of person mailing paper)

(Petition to Accept Delayed Payment of Issue Fee—Failure to Pay Unintentional (37 CFR 1.316(c)) [11-5]—page 1 of 2)



## 4. Payment of the issue fee:

- ☐ has been filed.  
☒ is enclosed.

## 5. Petition fee (37 CFR 1.17(m))

Application status is:

- ☐ small business entity—fee \$280.00  
☐ verified statement enclosed  
☐ verified statement filed  
☒ other than small entity—fee \$560.00

## 6. Payment of fee:

- ☐ Enclosed please find check for \$\_\_\_\_\_  
☐ Charge Account \_\_\_\_\_ for any additional fee required.  
☒ Charge Account 07-1765 the sum of \$560.00 and for any additional fee required. A duplicate of this petition is attached.

## 7. Verification:

NOTE: The statement that the delayed payment was unintentional must be a verified statement if made by a person not registered to practice before the PTO, 37 CFR 1.137. Check the next box if this is the case.

☐ I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Date: DECEMBER 23, 1987

Mark B. Quatt  
 (Signature of person making statement  
 that abandonment was unintentional)

Mark B. Quatt  
 (Type or print name of person making statement)  
P. O. Box 464

(Residence of person making statement)  
Duncan, S. C. 29334

Reg. No.: 30,484

Tel. No.: (803) 433-2817

Mark B. Quatt  
 SIGNATURE OF ATTORNEY

Mark B. Quatt  
 Type or print name of attorney  
P. O. Box 464

P.O. Address  
Duncan, S. C. 29334

(Petition to Accept Delayed Payment of Issue Fee—Failure to Pay Unintentional (37 CFR 1.316(c)) [11-5]—page 2 of 2)

(Rev. 29-2/84 Pub. 605)

FORM 11-5

11-18